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ROLE OF TEEKSHNA KSHARA BHAVITA, KSHAR SUTRA IN THE MANAGEMENT OF FISTULA-IN-ANO

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INTRODUCTION

A clinical study has been conducted on 100 patients of fistula-in-ano. The observations were recorded under various parameters.

The total of 100 patients have been divided into two groups of control (I) and treated (II) and 50 patients were kept in each group respectively. In I, the Standard Kshara Sutra (Apamarga Kshara + Snuhi Ksheera + Haridra) was applied while in II, the Teekshna Kshara Sutra was applied and the study was carried out on various parameters including unit cutting time in days/cm to assess the exact duration of the treatment.

There were maximum 71 patients diagnosed as Parisravi Bhagandara, 11 cases were Shataponak and 18 cases were diagnosed as Ushtragreeva Bhagandara. The maximum 65 parionts were suffering from low-anal fistula, 26 patients with high-anal fistula, 6 patients with subcutaneous and 3 patients with sub-mucous fistulae were reported. The average unit cutting time in control group was found to be 6.6 days/cm., while in treated group the average U.C.T. was just 5.0 days/cm.

Kshara Sutra is a well known therapy of Ayurveda. Kshara Sutra therapy is very simple and an ambulatory technique, so it can be carried out in outdoor clinic within minimum and simple instruments and material.

The original text books of Brihatrayee do not give a line about the preparation of the threads. Out of the later group of text books of Laghutrayee only the last book Bhava Prakash throws some light on this aspect of problem by mentioning some kind of threads (Bha. Pra. Mad. Kha. Arsh. Adhi.) used for the treatment of Arsha and Bhagandara. This thread has not been clearly termed as Kshara Sutra by the author, but the successive commentators and editors of Bhava Prakash have Cefinitely declared it to be the same. It should be noted that the thread descrfibed by Bhava Prakash does not contain any Kshara as its component. According to the references quoted from Bhava Prakash, Haridra Churna and Snuhi Ksheera are the only ingredients of Kshara Sutra.

According to Carakapani Dutta the thread has to be soaked with the latex and repeatedly smeared with the turmeric power only. He also has not mentioned about Kshara.

But the descriptions in Susruta Samhita are suggestive that the thread has to be smeared chiefly with Kshara. But since Kshara alone has no property of sticking to the thread for holding its particles over the thread, it is presumed that he might have been using Kshara in liquild form.

The object of present study is to find out the nearest possibility of type of Kshara used during Susruta's time and other ancient authors.

Therefore, the present study was planned to find out the efficacy of Kshara Sutra prepared by Teekshna Kshara alone in liquid form in the hope that this may be more useful in the management of fistula -in-ano in comparison to any other Kshara Sutra.

MATERIALS AND METHODS

Ingredients: Apamarga. Palasa, Kutaja. Paribhadra, Vibhitaka,. Aragwadha, Patala, Karanja, Vasa, Chitraka, Gunja, Danti, Dravanti, Langali, Pravala, Bida Lavan, Sauarchala Lavan, Hingu, Vacha, Sukti.

Method of preparation of Teekshna Kshara: The dried Panchanga of Apamarga plant was burnt with lime stone and other Prakshep Dravyas like Palasa. Kutaja etc. Then the ash was collected The collected ashes were

mixed with water in one to six ratio of ash and water was filtered through a cloth for 21 times in a big vessel. The filtrate was taken out and the residue was discarded. Again, the filtrate was then poured in the percolator which is covered with whatman filter paper and allowed it for filtration. Then the filtrate was taken separately in a big vessel kept in on Mandagni and continuously stirred. During this process of stirring, the powder which was made from Sodhita Hingu, Pravala, Sukti, Lavans and other ingredients was mixed in the solution. After 6 to 8 hours of this process a thick solution was obtained. This is the Teekshna Kshara which was used for the preparation of Kshara Sutra in the presents study.

Technique for preparation of Teekshna Kshera Sutra: As the Kshara which has been used in present study is in the liquid form, for preparation of Teekshna Kshara Sutra dipping method was adopted. The surgical Barbours linen thread was dipped in to the Teekshna Kshara and was allowed to dry spontancously. Thus, the thread was dipped in the Kshara tor nine times. After cutting the thread in to equal peices of 30 cm. each, threads were kept in the K.S. cabinet for sterilization and drying.

Clinical study

Slection of cases: A total number of 100 cases were taken for the present study Irrespective of their age, Sex. occupation, recurrence and other signs and symptoms. They were grouped into two each containing 50 cases. First group is labelled as Group -I (control) and kept under treatment with standard Kshara Sutra of Apamarga. The second group ie Group - II (treated) of 50 patients was kept under treatment with Teekshna Kshara Sutra and results were compared

Examination of the patient: All the 100 patients were thoroughly examined and investigaterd as per the proforma. All the patients were prepared for bowel-evacuation. cleaning of the part and administration of injection of tetanus toxoid, before the application of Kshara Sutra.

Application of Kshara Sutra through external opening: After keeping the patient in lithotomy position; assessment of the tract was made by using a probe. After introducting the probe from the external opening, a plain thread is applicd at its distal end's eye and the probe is taken out through the anal canal, which ultimately draws the thread into the tract. Then the probe is removed and the two ends of the thread are tied.

Application within anal canal: In high anal fistula cases where the external opening was not present, a lubricated gloved finger is introduced in the anal canal to guide the probe, then the specially designed ridged probe pierced the anal wall at its least resistance area. The finger of the other hand is withdrawn outside and it is hooked by thread so as to form a loop. Then the finger along with thread loop is introduced into the anal canal and the loop of the thread is hooked on the ridge of proximal end of the probe then the probe is withdrawn in the same direction. This ultimately places the thread in the tract and the ligation is done as usual.

Change of Kshara Sutra: Plain thread is used at the time of primary threading and on the next day Kshara Sutra is applied lateral to the knot of previous thread. Then an artery forceps is applied medial to the same knot and the old thread is cut between the artery forceps and the knot. Pulling of the artery forceps along with the thread ultimately replaces the oldthread by Kshara Sutra, The two ends are ligated and dressing is done. The same procedure is followed for successive changes of Ksharsutra at an internal of one week.

OBSERVATION AND RESULTS

General analysis of patients in relation to age group. The table shows the incidence of Bhagandara is maximum 45% in the age group of 21-30 ycars and is minimum 2% in the age group of 51 years and above.

Table 1: Distribution of patients according to age.

Age (in years)	No. of patients	Percentage
Upto 20	12	12
21 to 30	45	45
312 to 40	26	26
41 to 50	15	15
51 & above	2	2
Total	**100**	**100**

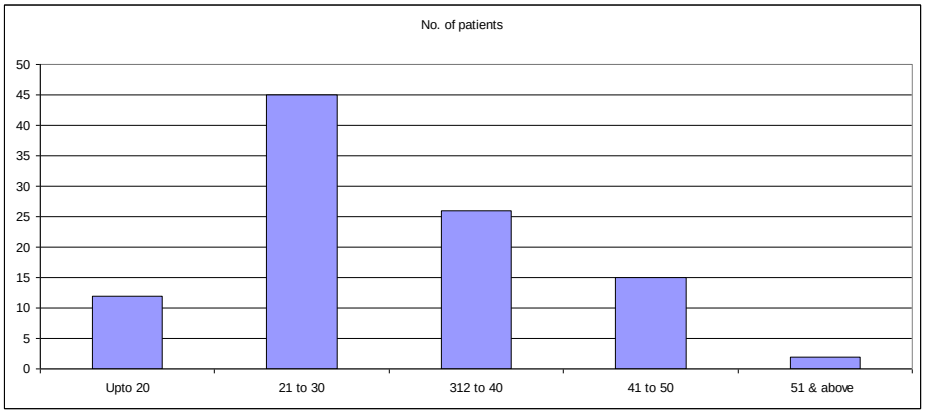
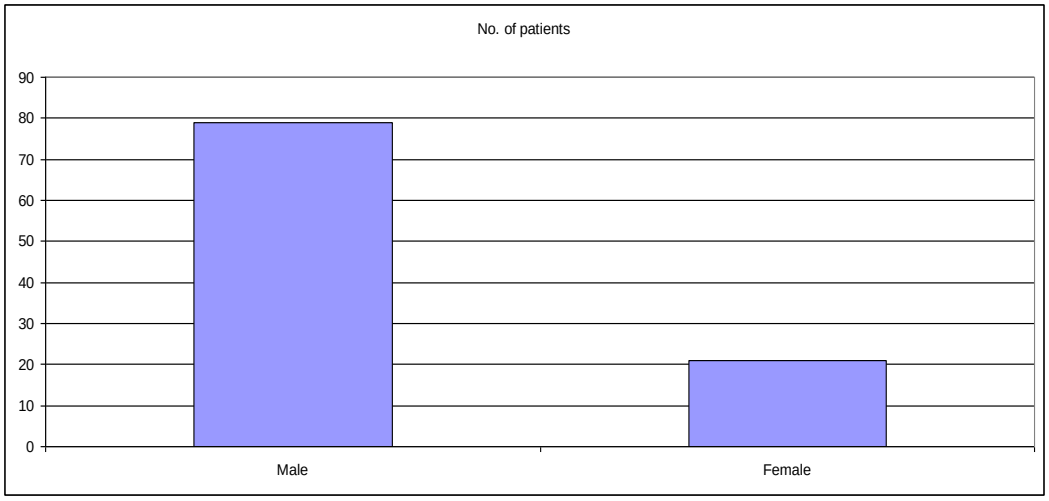


Table 2: Distribution of patients according sex.

Sex	No. of patients	Percentage
Male	79	79
Female	21	21
Total	**100**	**10**

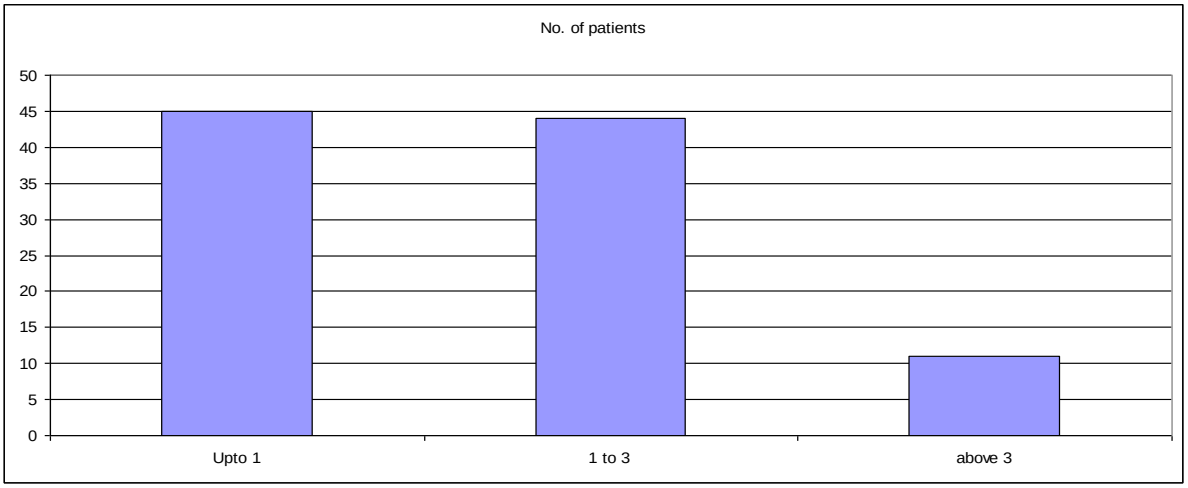


The maximum no. of patients (79%) were males while females were recorded less (21%). This data suggests that the disease may be predominantly common in males.

Chronicity of the disease: Maximum number of cases were reported having the disease of early duration.

Table 3: Chronicity of the disease in cases.

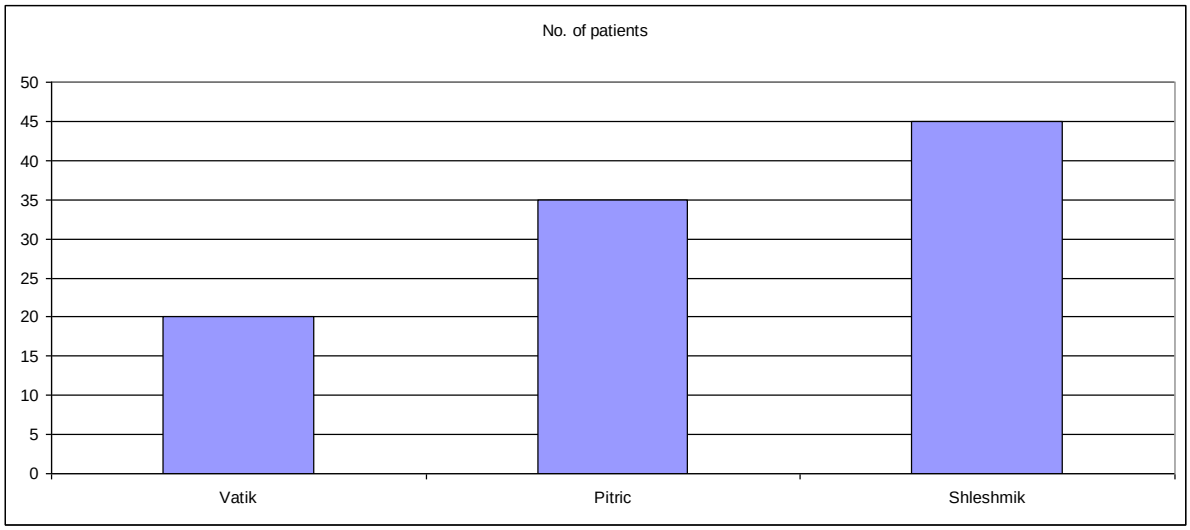
Duration of illness (in years)	No. of patients	Percentage
Upto 1	45	45
1 to 3	44	44
above 3	11	11
Total	**100**	**10**



Prakriti of the patients: In this study, number of patients of Shleshmic Prikriti were more if comparison to Vatik and Paittic Prakriti.

Table 4: Distribution of patients according to Prakriti.

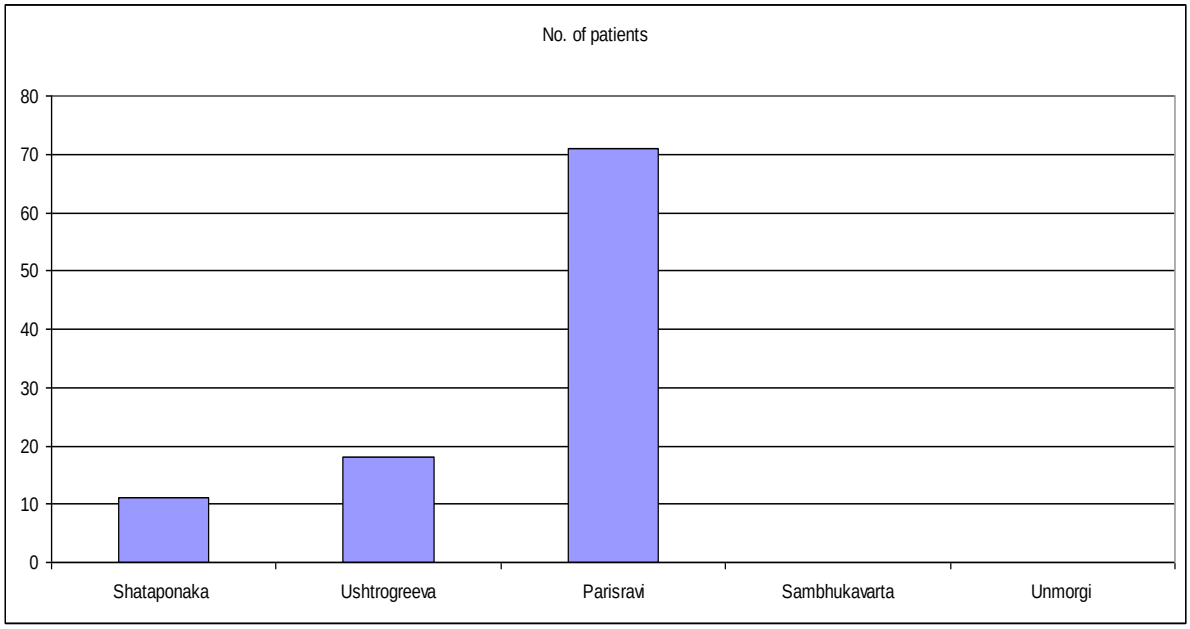
Type	No. of patients	Percentage
Vatik	20	20
Pitric	35	35
Shleshmik	45	45
Total	**100**	**100**



Type of Bhagandara: The maximum patients were reported having the Parisravi Bhagandara in comparision to other types.

Table 5: Distribution of Bhagandara.

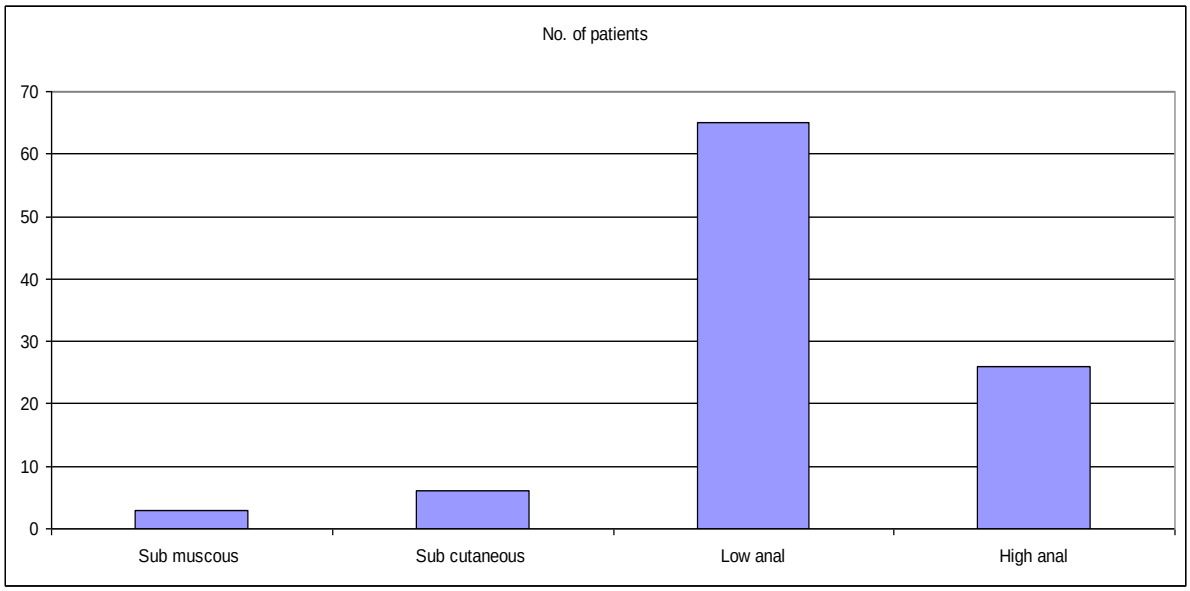
Types	No. of patients	Percentage
Shataponaka	11	11
Ushtrogreeva	18	18
Parisravi	71	71
Sambhukavarta	0	-
Unmorgi	0	-
Total	**100**	**100**



Type of Fistula - in - ano: As per modern classification, low anal type of fistula in ano were found maximum in number in comparision to sub mucous, sub cutaneous and high anal fistula.

Table 6: Incidence of type of fistula-in-ano.

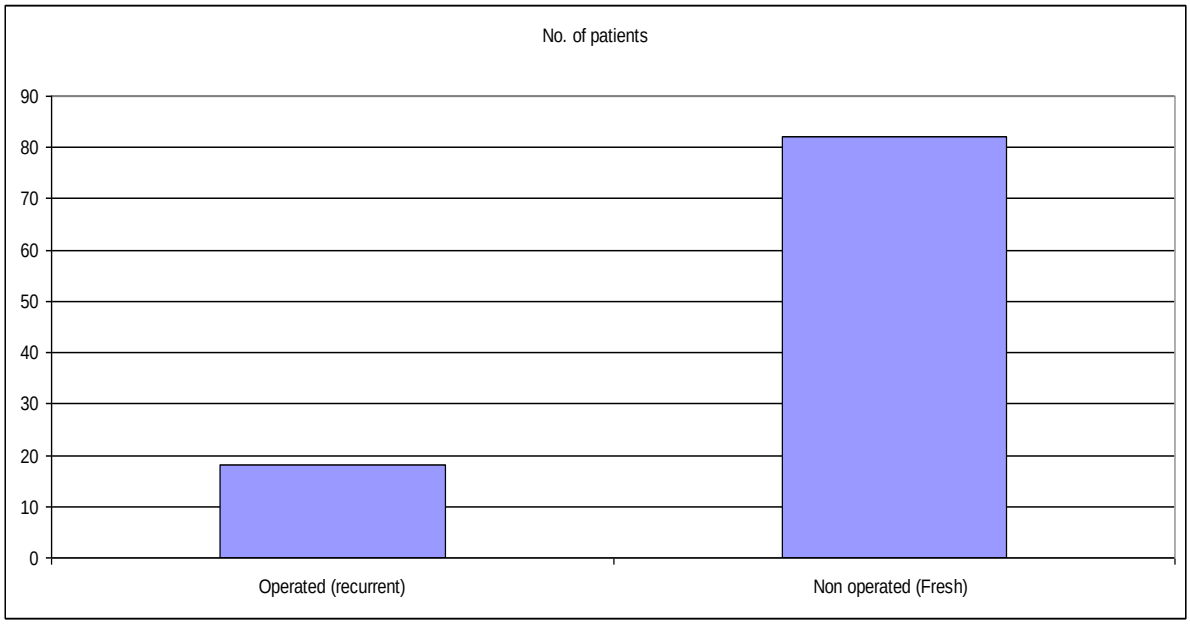
Type of fistula	No. of patients	Percentage
Sub muscous	3	3
Sub cutaneous	6	6
Low anal	65	65
High anal	26	26
Total	**100**	**100**



Analysis of recurrent and fresh cases: Fresh cases non operated were more in number than previously operated cases.

Table 7: Incidence of type of cases.

Type of cases	No. of patients	Percentage
Operated (recurrent)	18	18
Non operated (Fresh)	82	82
Total	**100**	**100**



Number of external opening: Cases having the single external opening were more than multiple opening.

Clockwise position of fistula openings: Maximum number of fistula openings were found at 6 and 7 O'clock position in left lower quadrant of posterior half.

Table 8: Analysis in relation to number of fistula openings.

No. of openings	No. of patients	Percentage
One	90	90
Two	10	10
Total	**100**	**100**

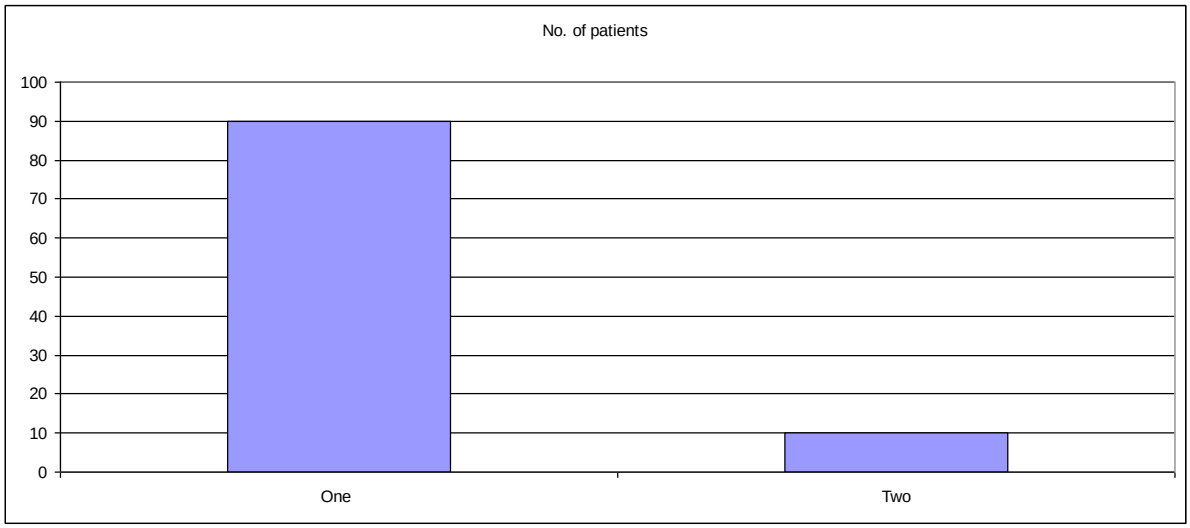
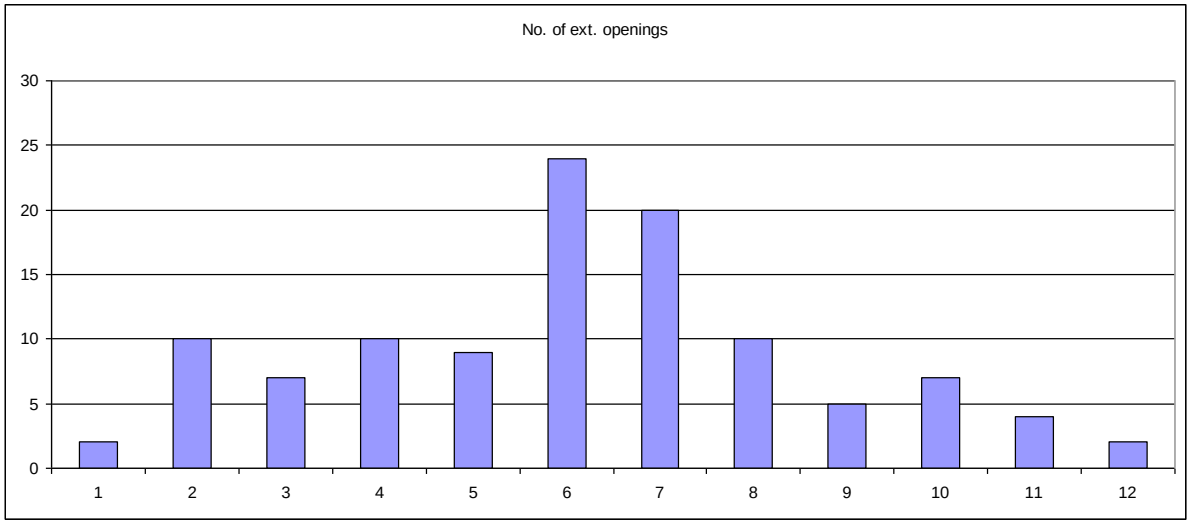


Table 9: Clockwise distribution of external openings.

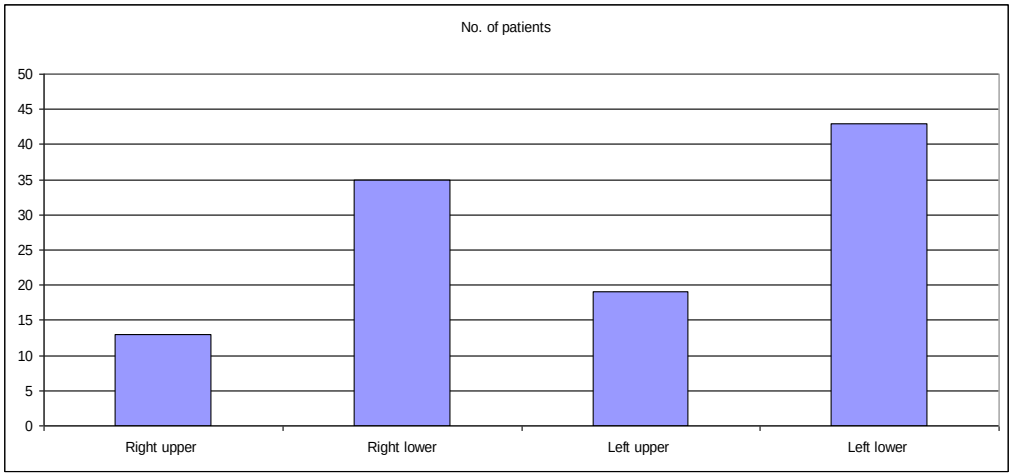
O' clock position	No. of ext. openings
1	2
2	10
3	7
4	10
5	9
6	24
7	20
8	10
9	5
10	7
11	4
12	2
Total	**110**



Quadrantwise distribution of external openings: The maximum number (43) of openings were located in left lower quadrant which is considered as 4, 5 and 6 O' clock positions in lithotomy positions.

Table 10: Openings in relation to quadrants.

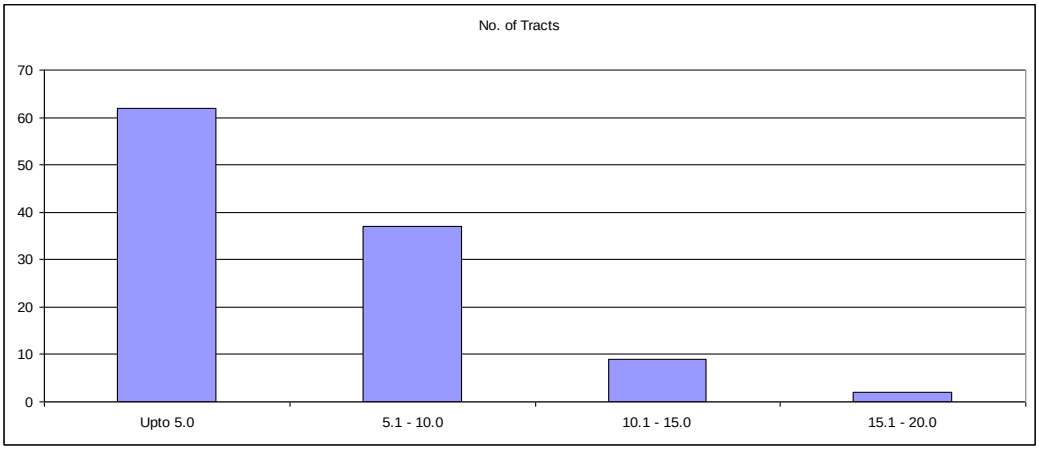
Quadrants	No. of patients	Percentage
Right upper	13	12
Right lower	35	32
Left upper	19	17
Left lower	43	39
Total	**110**	**100**



Length of fistulous tract: In the present study out of 110 fistulous tracts, the maximum number of 62 tracts were observed to range up to 5 cm of length.

Table 11: Incidence of length of fistulous tract.

Length (in cm)	No. of Tracts	Percentage
Upto 5.0	62	56
5.1 - 10.0	37	34
10.1 - 15.0	9	8
15.1 - 20.0	2	2
Total	**110**	**100**



Clinical findings: During application and changing of the Teekshna Kshara sutra, it was found that clinical symptoms like pain, irritation etc. relatively less in comparison to standard Kshara Sutra owing to flexibility of the Teeksina Kshara Sutra.

Unit cutting time (U.C.T.): It is an important parameter to assess the efficacy of the Kshara Sutra, which indicates the average time in days taken to cut and to heal one centimetre of fistulous tract. The U.C.T. is calculated by the following formula :

$$UCT = \frac{\text{Total number of days taken to cut through the tract}}{\text{Initial length of the Kshara Sutra in cm.}}$$

= Time taken in days to cut one centimetre of fistulous tract with simultaneous healing.

Unit cutting time in relation to age groups

The average U.C.T. was found almost same (Gi days/cm.) in patients between the age group of 31-40 vears and 20 vears in treated group, while in control group it was minimum (6 days/cm.) between the age group of 31-40 years and was maximum (8 days/cm.) in above 50. vears age group (Table 12 & Fig. I).

Unit cutting time in previously operated and non-operated cases

Analysis shows that the average U.C.T. was less is non-operated (fresh) cases in both groups in comparison to previously opcrated cases. And the average U.C.T. was min. in G-ll in comparison to G-I (Table 13 and Fig. Il).

Table 12: Average U.C.T. in relation to age group.

Age group (in years)	Average UCT (in days/cm)	
	G-I (Control)	G-II (treated)
Upto 20	7	6
21 to 30	7	5
31 to 40	6	5
41 to 50	6	5
Above 50	8	5

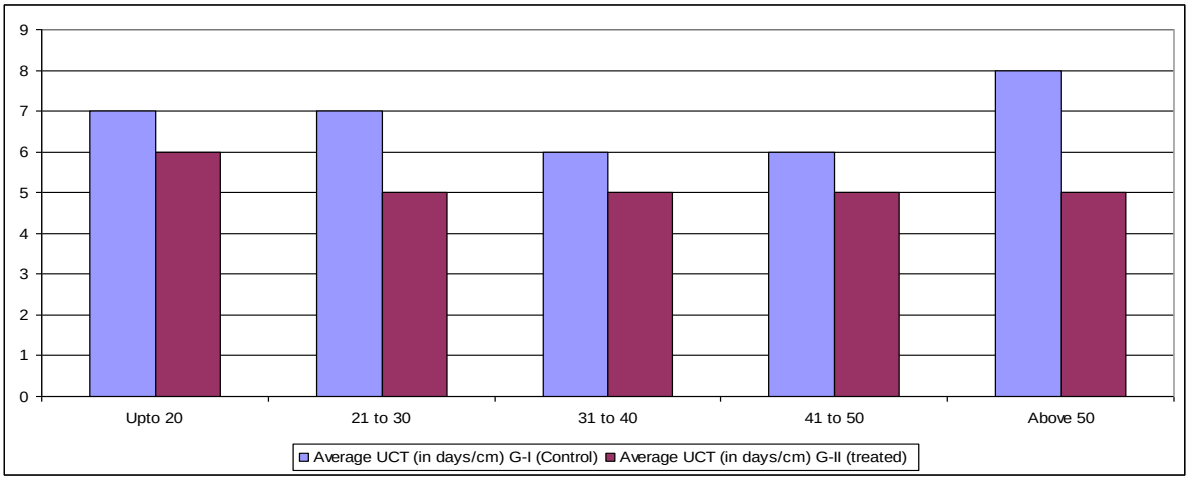
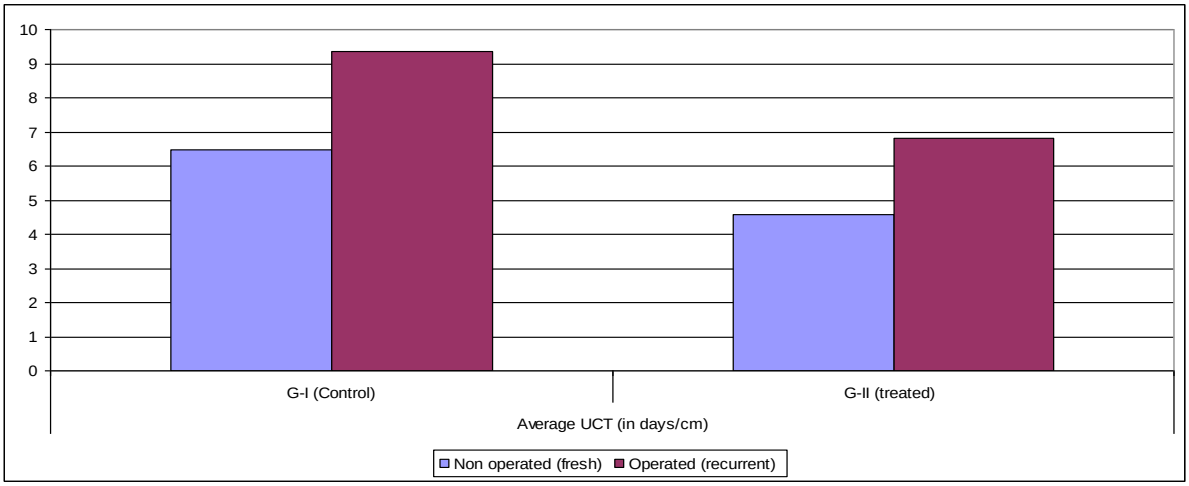


Table 13: Average U.C.T. of operated and non-operated cases.

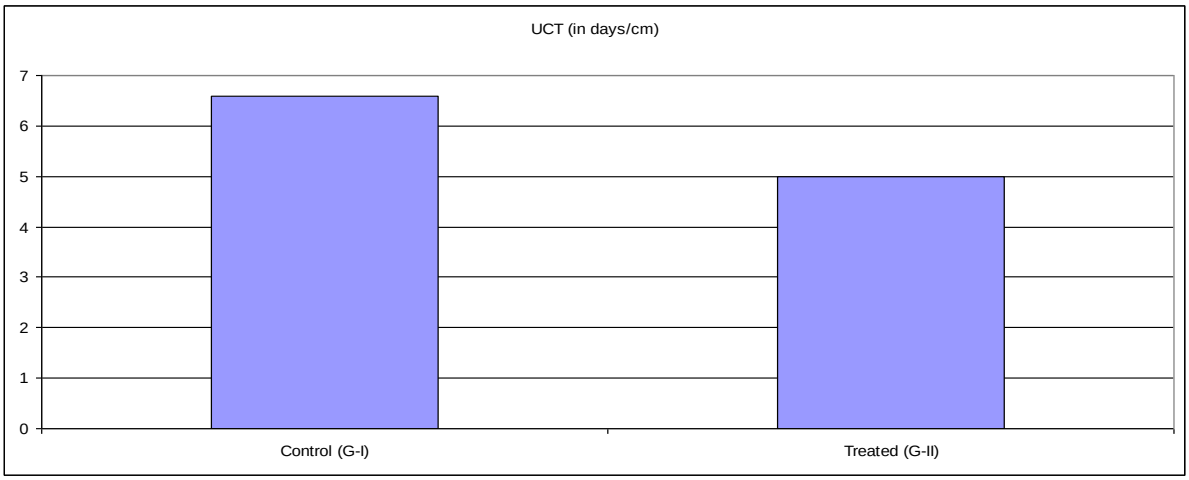
Types of Cases	Average UCT (in days/cm)	
	G-I (Control)	G-II (treated)
Non operated (fresh)	6.48	4.57
Operated (recurrent)	9.37	6.81



Average unit cutting time: After all, a comparative study was done to find out the average U.C.T. in control (G-1) and treated (G-HI) groups (Table 14 Fig. III.

Table 14: Average U.C.T. in Different groups.

Group	UCT (in days/cm)
Control (G-I)	6.6
Treated (G-II)	5.0



Analysis shows that the average U.C.T. was 5.0 days/cm in treated (G-II) group which is much less in comparison to 6.6 days/cm. that found in control (G-I) group.

DISCUSSION AND CONCLUSION

The following special observations have been made from the present study.

1. The incidence of fistula-in-ano is more common between 21-30 years of age group.
2. Males are more prone to this disease in comparison to females.
3. Number of patients of Shleshmic Prakriti were more in comparison to Vatic and Paittic Prakriti.
4. Maximum patients were reported having the Parisravi type of Bhagandara in comparison to others.
5. It was observed that the more the chronicity of the disease, more the U.C.T. in treated (G-II) group.
6. U.C.T. was more in recurrent cases than in fresh cases due to the formation of fibrous scar tissue over the operated region.
7. It has been reported that lesser the tract, slower the cutting rate and longer the tract, faster the cutting rate.
8. Comparison of average U.C.T. in both G-I & G-ll had shown almost similar results with slight tendency towards better results by Teekshna Kshara Bhavita Sutra. Average U.C.T. in G-I was 6.6 days/cm. while in G-II it was 5.0 days/cm.
9. Total duration of treatment was reduced by using Teekshha Kshara Sutra in comparison to standard Kshara Sutra
10. During application and changing to Teekshna Kshara sutra it was found that clinical symptoms like pain, irritation are relatively less in comparison to standard Kshara Sutra, owing to the flexibility of the former.
11. Out of 50 cases, treated with Teekshna Kshara Sutra, no recurrence has been reported even after a long term follow up.

Thus, it is concluded that although the action of Teekshna Kshara Sutra appears to be slightly better than the original Kshara Sutra, the difference is minimal and not highly significant.

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